SECTION 09 9100

PAINTING

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LANL MASTER SPECIFICATION

When editing to suit project, author shall add job-specific requirements and delete only those portions that in no way apply to the activity (e.g., a component that does not apply). To seek a variance from applicable requirements, contact the ESM Architectural POC.

When assembling a specification package, include applicable specifications from all Divisions, especially Division 1, General Requirements.

Delete information within “stars” during editing.

Specification developed for ML-3 / ML-4 projects. For ML-1 / ML-2, additional requirements and QA reviews are required.

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PART 1 GENERAL

1.1 WORK INCLUDED

A. Surface preparation.

B. Application of paint finishes.

1.2 DEFINITIONS

A. Conform to ANSI/ASTM D16 for definitions of terms used in this Section.

1.3 ACRONYMS

A. MPI – Master Painters Institute.

B. LEED – Leadership in Energy and Environmental Design.

1.4 SUBMITTALS

A. Submit the following in accordance with the requirements of Section 01 3000:

1. Catalog data including volatile organic compound (VOC) content and Material Safety Data Sheets on all finishing products including name of proposed paint manufacturer for approval and to facilitate selection of colors by LANL.

2. Manufacturer's installation (application) instruction.

1.5 REGULATORY REQUIREMENTS

A. Materials: Minimum Class B per NFPA 101.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptance.

B. Container labeling shall include manufacturer's name, type of paint, brand name, brand code, VOC content, coverage, surface preparation, drying time, clean-up, color designation, and instructions for mixing and reducing.

C. Store paint materials at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in well ventilated area, unless required otherwise by manufacturer's instructions.

D. Take precautionary measures to prevent fire hazards and spontaneous combustion.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Provide continuous ventilation and heating facilities to maintain surface and ambient temperatures above 45 degrees F for 24 hours before, during, and 48 hours after application of finishes, unless required otherwise by manufacturer's instructions.

B. Do not apply exterior coatings during rain or snow, or when relative humidity is above 50 percent, unless required otherwise by manufacturer's instructions.

C. Do not apply latex paints when temperatures are below 45 degrees F for interiors and 50 degrees F for exterior, unless required otherwise by manufacturer's instructions.

1.8 EXTRA STOCK

A. Provide [1] extra gallon of each type, color, and surface texture to LANL.

B. Label each container with color, texture, room locations, in addition to the manufacturer's label.

PART 2 PRODUCTS

2.1 MATERIALS

A. The following compounds shall not be used in paints or primers on any projects:

Prohibited organic compounds

1.	Methylene chloride	11.	Di-n-butyl phthalate
2.	1,1,1-Trichloroethane	12.	Di-noctyl phthalate
3.	Benezene	13.	Diethyl phthalate
4.	Toluene (methylbenzene)	14.	Dimethyl phthalate
5.	Ethylbenzene	15.	Isophorone
6.	Vinyl chloride	16.	Formaldehyde
7.	Naphthalene	17.	Methyl ethyl ketone
8.	1,2-Dichlorobenzene	18.	Methyle isobutyl ketone
9.	Di (2-ethylhexyl) phthalate	19.	Acrolein
10.	Butyl benzyl phthalate	20.	Acrylonitrile

Prohibited metals (including their oxides)

1.	Antimony	4.	Lead
2.	Cadmium	5.	Mercury
3.	Hexavalent chromium		

B. The VOC concentrations of the products shall not exceed:

Interior Coatings	
Non-flat	150 grams/liter
Flat	50 grams/liter

Exterior Coatings	
Non-flat	200 grams/liter
Flat	100 grams/liter

C. Provide coatings of ready mixed type, except field-catalyzed coatings. Process pigments to a soft consistency, capable of being readily and uniformly dispersed to a homogeneous coating.

D. Provide latex coatings containing recycled content, when available, that in all aspects meet the requirements of this Section and its referenced standards.

2.2 MANUFACTURERS

A. Benjamin Moor and Co. (Moore).

B. Devoe and Raynolds Co. (Devoe).

C. Dunn-Edwards Paint Company.

D. Glidden Coating sand Resins, Division of SCM Corporation (Glidden).

E. PPG Industries, Pittsburgh Paints (Pittsburgh).

F. Pratt and Lambert (P&L).

PART 3 EXECUTION

3.1 INSPECTION

A. Verify that surfaces and substrate conditions are ready to receive work as instructed by the product manufacturer before applying paint finish.

B. Verify that all items and elements not scheduled to receive paint are fully protected by adequate means.

C. Examine surfaces scheduled to be finished prior to commencement of work. Report to Contract Administrator any condition that may potentially affect proper application.

D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the manufacturer's recommendation.

3.2 PREPARATION

A. Remove grease, oil, and other contaminants as recommended by manufacturer.

B. Correct minor defects and clean surfaces which affect work of this Section.

C. Remove mildew from impervious surfaces by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

D. Fill minor defects in gypsum surfaces with Latex joint compound. Spot-prime defects after repair.

E. Remove surface contamination and oils from galvanized surfaces and wash with solvent.

F. Remove grease, scale, dirt, and rust from uncoated steel and iron surfaces. Where heavy coatings and scale are evident, remove by wire brushing and sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.

G. Sand and scrape to remove loose primer and rust from shop primed steel and iron surfaces. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.

H. Seal top and bottom of field painted doors with primer.

3.3 PROTECTION

A. Furnish drop cloths, shields, and protective methods to prevent spray or droppings from disfiguring or damaging other surfaces/elements.

B. Repair damage to other surfaces/elements caused by work of this Section. If surface/element is a mechanical/electrical or fire protection product not scheduled to be painted, repair is not allowed – replace with specified new product.

C. Repairs allowed that do not meet the satisfaction of the Contract Administrator shall be cause for replacement of the damaged work with new specified replacement products.

D. Remove empty paint containers from site.

3.4 APPLICATION

A. Apply products in accordance with manufacturer's instructions.

B. Apply each coat to uniform finish.

C. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.

D. Sand lightly between coats to achieve required finish.

E. Allow applied coat to dry before next coat is applied in accordance with manufacturer’s instructions.

3.5 FINISHING MECHANICAL AND ELECTRICAL MATERIALS

A. Paint shop primed equipment.

B. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

C. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, except where items are prefinished.

D. Paint interior surfaces of air ducts, and convector and baseboard heating cabinets that are visible through grilles and louvers and one coat of flat black paint, to limit of sight line. Paint dampers exposed behind louvers, grilles, and convector and baseboard cabinets to match face panels. Do not paint fire-rated dampers.

E. Paint conduit exposed in finished areas and conduit exposed at exterior.

F. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.

3.6 CLEANING

A. As work proceeds, promptly remove paint where over-sprayed, spilled, splashed, or spattered. Acceptance of work depends on complete remediation of misapplied coatings.

B. During progress of work, cloths and material that may constitute a fire hazard must be placed in metal containers and removed from site daily.

C. Collect cotton waste, cloths, and material that may constitute a fire hazard and place in closed metal containers and remove from site daily.

D. Do not wash paint brushes or equipment and release into sanitary sewer.

3.7 SCHEDULE - EXTERIOR SURFACES

A. Steel - Unprimed

1. Apply 1 coat of anti-corrosion primer conforming to MPI-76.

2. Apply 2 coats of alkyd enamel, gloss, conforming to MPI-48.

B. Steel - Shop Primed

1. Match shop primer to touch up.

2. Apply 2 coats of alkyd enamel, gloss, conforming to MPI-9.

C. Steel - Galvanized

1. Apply 1 coat of anti-corrosion primer conforming to MPI-76.

2. Apply 2 coats of alkyd enamel, gloss, conforming to MPI-9.

D. Concrete, Concrete Block

1. Apply 1 coat of vinyl acrylic latex block filler conforming to MPI-116.

2. Apply 2 coats of acrylic latex, semi-gloss, conforming to MPI-110-T2 (some products meet LEED).

3.8 INTERIOR SURFACES

A. Concrete Floor

Seal floors with Euro Floor Coat, Clear Bond, or approved equal sealer.

B. Steel - Unprimed

1. Apply 1 coat of primer conforming to MPI-76.

2. Apply 2 coats of acrylic latex enamel, semi-gloss, conforming to MPI-54 (some products meet LEED).

C. Steel - Shop Primed

1. Match shop primer to touch up.

2. Apply 2 coats of acrylic latex enamel, semi-gloss, conforming to MPI-54 (some products meet LEED).

D. Steel - Galvanized

1. Touch-up with original primer conforming to MPI-76.

2. Apply 2 coats of acrylic latex enamel, semi-gloss, conforming to MPI-54 (some products meet LEED).

E. Gypsum Board, Walls

1. Apply 1 coat of latex wall primer conforming to MPI-50 (all products meet LEED).

2. Apply 2 coats of acrylic latex conforming to [MPI-110-T1, gloss] [MPI-54, semi-gloss] [MPI-53, flat] (some products meet LEED).

F. Gypsum Board, Ceilings

1. Apply 1 coat of latex wall primer conforming to MPI-50 (all products meet LEED).

2. Apply 2 coats of acrylic latex, flat, conforming to MPI-53 (some products meet LEED).

G. Plaster

1. Apply 1 coat of latex wall primer conforming to MPI-50 (all products meet LEED).

2. Apply 2 coats of acrylic latex conforming to [MPI-110-T1, gloss] [MPI-54, semi-gloss] [MPI-53, flat] (some products meet LEED).

H. Concrete, Concrete Block, Wet Areas

1. Apply 1 coat of hi-solid block filler, MPI-116.

2. Apply 2 coats of water-based catalyzed epoxy.

I. Transparent Finish Woodwork

1. Apply 1 coat of transparent water-base stain conforming to MPI-90.

2. Apply 2 coats of stain polyurethane conforming to MPI-56.

END OF SECTION

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Do not delete the following information:
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FOR LANL USE ONLY

This project specification is based on LANL Master Specification 09 9100, Rev. 1, dated July 20, 2006.